REMARKS

Reconsideration and allowance are respectfully requested. Claims 23-31 and 33-44 are now pending. By this Amendment, the independent claims are now claims 23, 27, and 35.

Claims Indicated as Allowable

Preliminarily, Applicant thanks the Examiner for the indication that claims 27-31 and 38-44 would be allowable if rewritten in independent form. Of these, Applicant has rewritten claim 27 in independent form, and so it is understood that the Examiner now considers claims 27-31 allowable. In addition, Applicant believes that other pending claims are also allowable, as discussed below.

Objection to Specification

As requested by the Examiner, substitute specification is attached. No changes have been made other than font type and paragraph numbering, and so the substitute specification contains no new matter.

Claim Objections

Claims 27, 33, and 41-44 are objected to for various informalities. Applicant has corrected these formalities, with the exception of the following. Applicant does not believe that "a voltage" should be changed to "the voltage" in claims 41-44, since there is no antecedent basis for "the voltage." Accordingly, Applicant has merely changed "a voltage of a word line" to "a voltage of the word line" in claims 41-44. It is believed that the objections have been fully addressed.

Claim Rejections

Claims 22-26 and 32-37 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,250,569 to Sasaki, et al. ("Sasaki"). Claims 22-26 and 32-37 are also rejected under 35 U.S.C. § 102(b) as being anticipated by JP Pub. 5-86864 to Koichi ("Koichi"). Claims 22-26 and 32-37 are additionally rejected under 35 U.S.C. § 102(b) as being anticipated by JP

Pub. 5-87027 to Hiroshi, et al. ("Hiroshi"). Applicant respectfully traverses all rejections in view of the amendments and remarks provided herein.

Independent claim 23 is amended only to place it in independent form to include all of the features of now-canceled claim 22. Claim 23 recites that a transistor has a first data state and a second data state. The first data state is a state in which impact ionization is generated near a drain junction by operating the transistor and in which excessive majority carriers produced by this impact ionization are held in the semiconductor layer. The second data state is a state in which a forward bias is applied between the semiconductor layer and the drain diffusion region to extract the excessive majority carriers from within the semiconductor layer to the drain diffusion region.

In contrast, Sasaki discloses memory element MC having a threshold value Vth of 1.3 volts when memory element MC is not charge-pumped. This is referred to as the "0" state. To change the state from "0" to "1," the charges are pumped into the floating substrate of memory element MC. (Sasaki, col. 5, lines 38-66). Therefore, the writing operation of Sasaki is clearly different from the above-recited feature of claim 23.

Nor do Koichi or Hiroshi teach or suggest the above-recited feature of claim 23. For instance, in both references, the majority carriers in the semiconductor layer are *not* extracted by a forward bias as claimed.

Independent claim 35 is also allowable over Sasaki, Koichi, and Hiroshi for at least similar reasons as discussed above with regard to claim 23.

The dependent claims are also allowable by virtue of depending from allowable independent claims, and further in view of the additional features recited therein.

Conclusion

All objections rejections having been addressed, it is believed that the present application is in condition for allowance, and notice to that effect is respectfully requested. Should the Examiner have any questions or feel that an interview would be desirable, the Examiner is invited to contact the undersigned at the number below.

Respectfully submitted,

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Dated: July 24, 2006